

# 2020 Forest Health Update

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# Background

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- The DFFM conducts an annual aerial survey of dead and dying trees.
- DFFM certified arborists, entomologists, and service foresters ground truth data and provide land managers and the public with information.
- In times of significant drought, trees become increasingly stressed and highly susceptible to insect and disease infestation.



# Forest Health Conditions in 2019 - RECAP

- There was a significant increase in bark beetle caused tree mortality on tribal lands
  - This damage occurred mostly in pinyon pine forests on Navajo and Hopi lands
- Foliar blight also caused significant defoliation across Northern Arizona
- There was a large increase in Mediterranean Pine Engraver in the NE Phoenix Metropolitan area



# Forest Health Conditions in 2019 - RECAP

- Below average monsoon season, June – September 2019
- **459,239 acres** of trees were impacted by bark beetles
- That was an **increase of 66%**, up from **275,934 acres** in 2018



# Historic Forest Health Conditions

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Year	2001	2002	2003	2004
Acres	82,323	509,601	1,683,412	135,369



**519%**

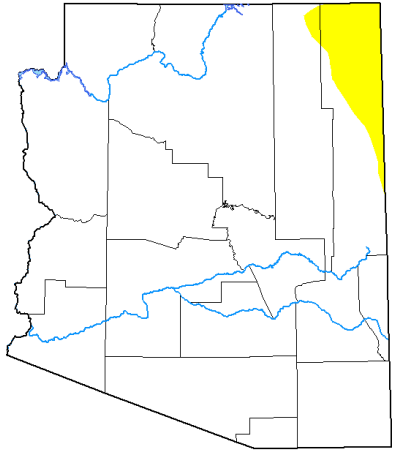
Year	2017	2018	2019	2020
Acres	45,003	275,933	459,238	?



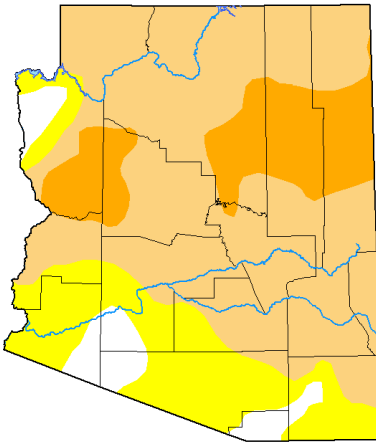
**513%**



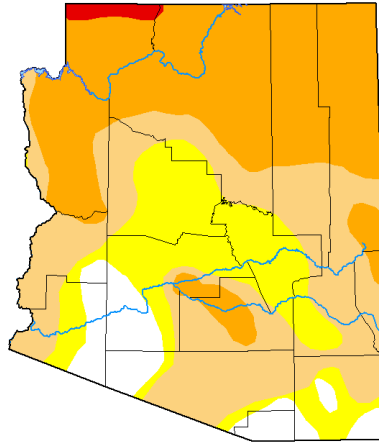
**July 2019**



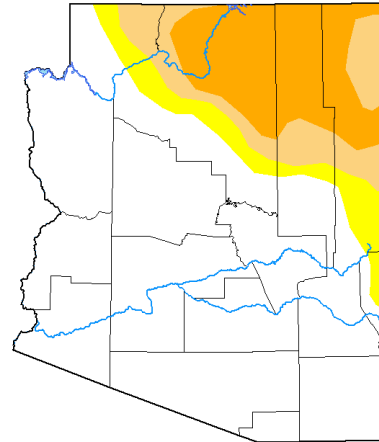
**September 2019**



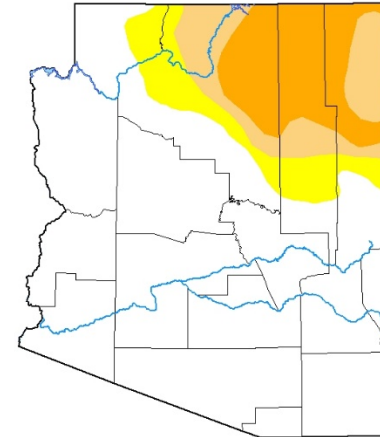
**November 2019**



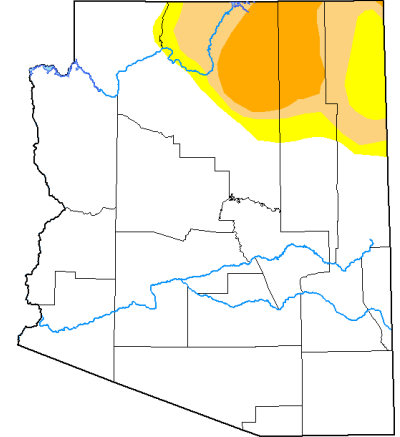
**January 2020**



**March 2020**

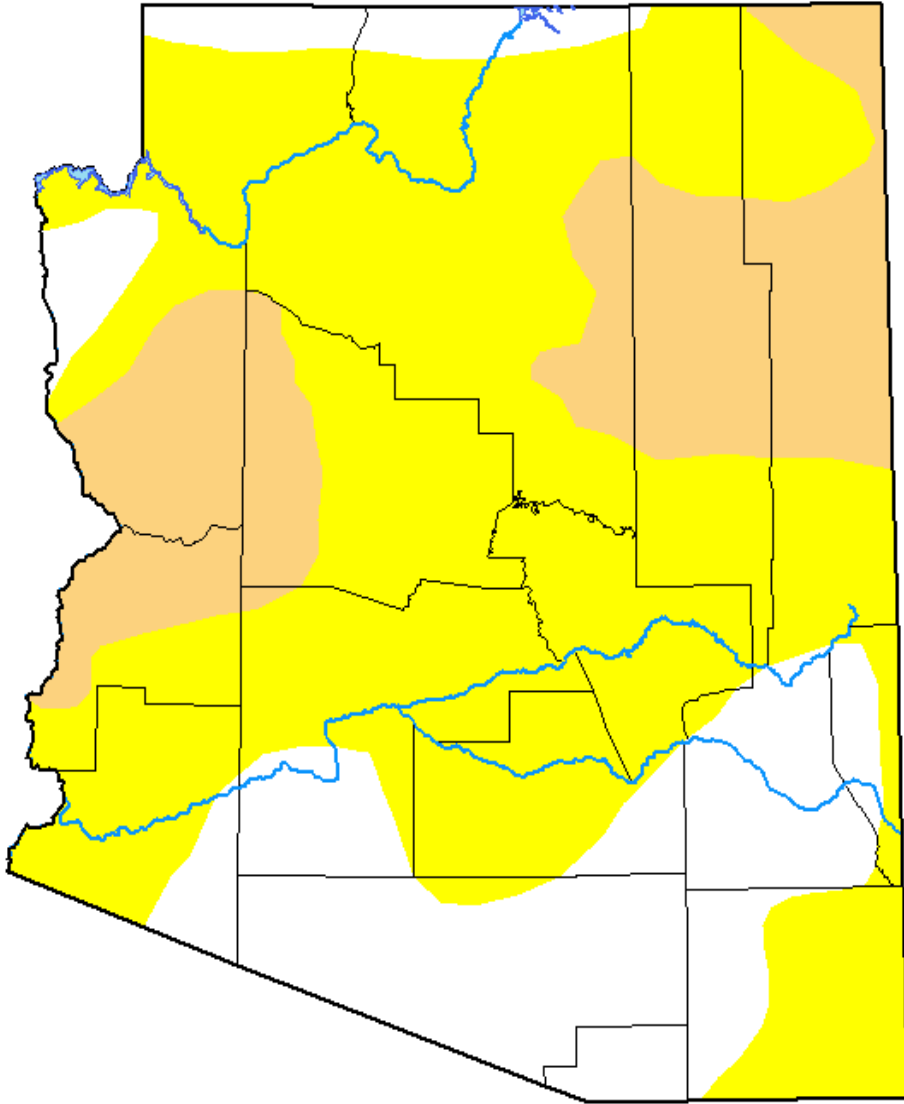


**May 2020**



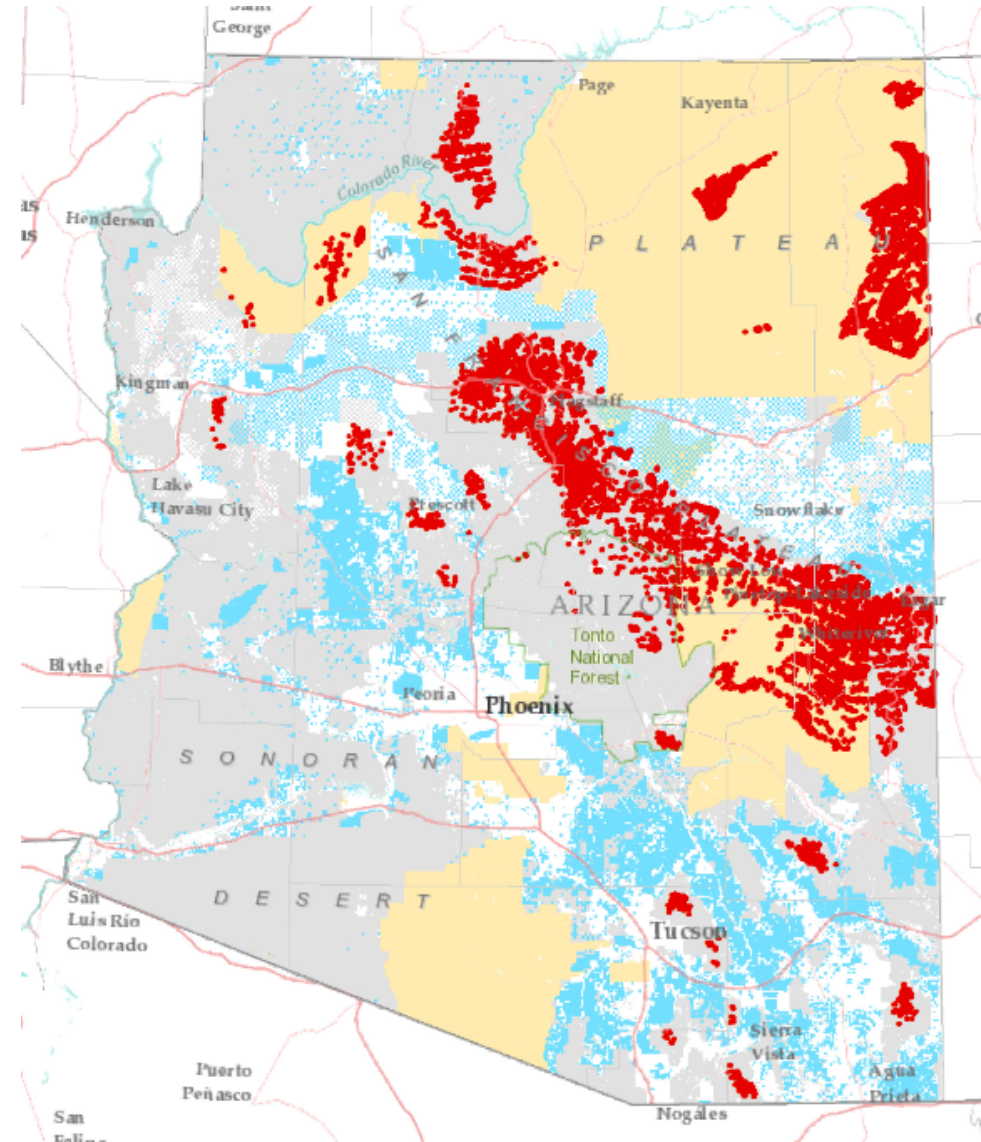


## Summer - 2019

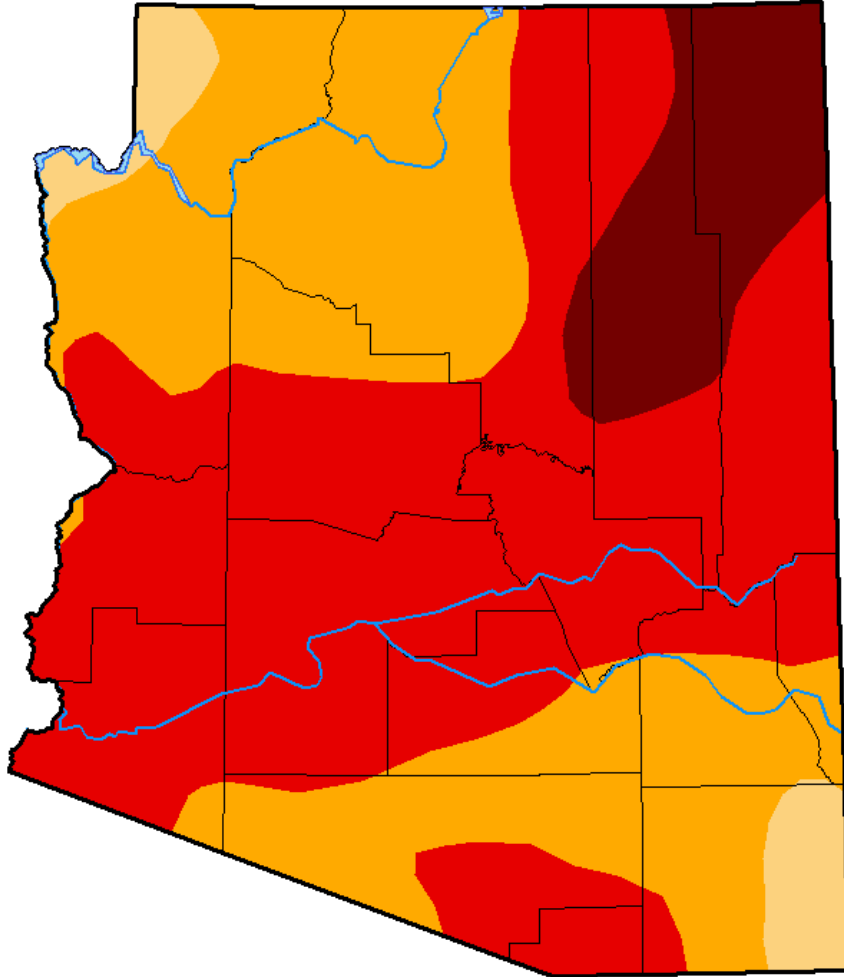


<https://droughtmonitor.unl.edu/>

## ADS Insect and Disease Locations - 2019

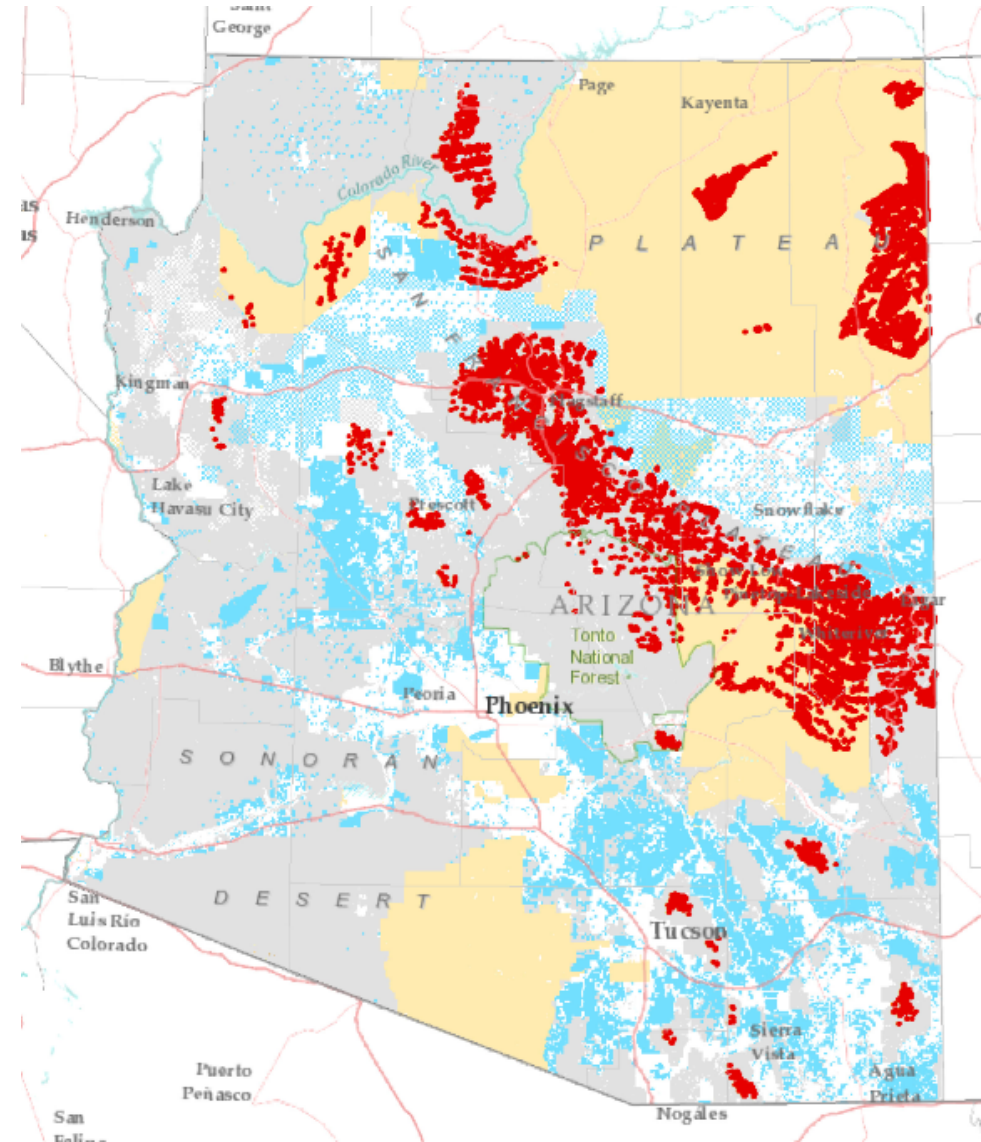


## Summer - 2018



<https://droughtmonitor.unl.edu/>

## ADS Insect and Disease Locations - 2019





# Forest Health Conditions in 2020

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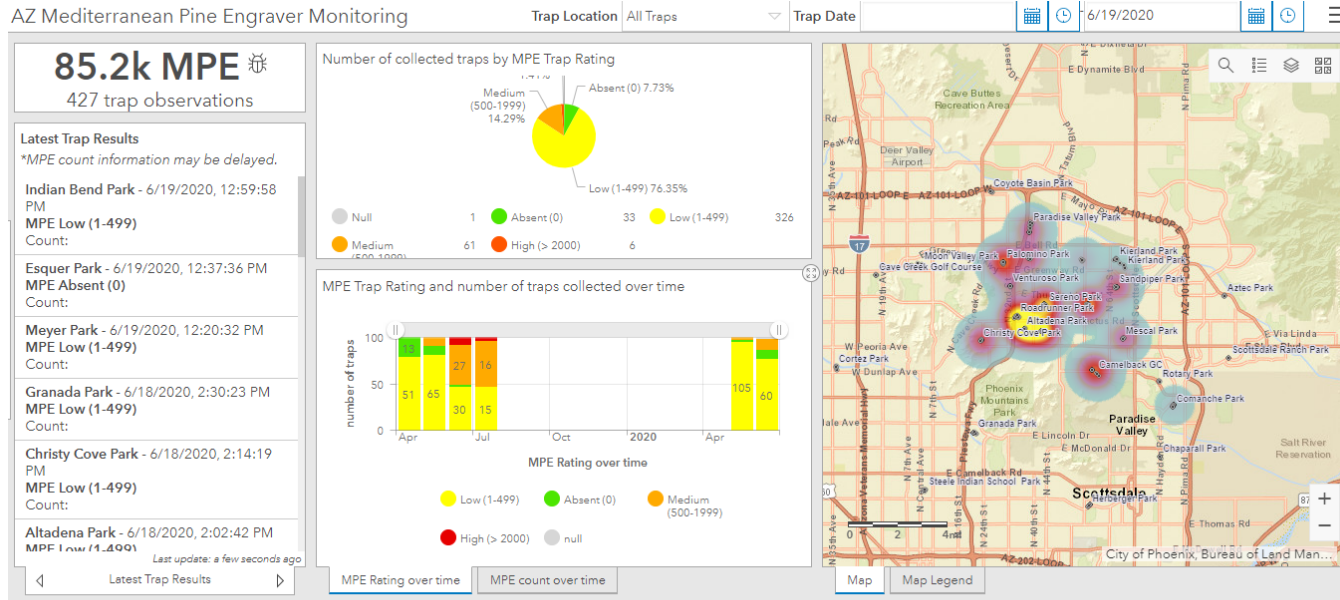


- Forest and woodland vegetation are showing signs of improvement from record precipitation
- Moisture improves tree health
- Damage from bark beetles should begin decreasing



# Urban Forest Health Conditions – Summer 2020

- Mediterranean Pine Engraver
- Aleppo Pine Blight



	2019	2020
Tree Number	BEL 22	BEL 22
Combined Crown Rating	1	4
Mite Condition	Light	Light
ArborJet Treatment	G4	N/A
DBH	25	25





# Thank You

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## ARIZONA FOREST HEALTH CONDITIONS 2019

A publication by the Forest Health Program of the Arizona  
Department of Forestry and Fire Management

Arizona is a state with incredible landscape diversity that ranges from the lower Sonoran Desert scrub and pinyon-juniper woodland to the high elevation spruce-fir forests.

Forests cover roughly 27% of the state and occupy 19.4 million acres. These forests are comprised of 37 species of coniferous and hardwood trees. The majority of forestland is located above the Mogollon Rim with distinct forested areas scattered throughout the rest of the state. Juniper (*Juniperus* spp.) and pinyon juniper (*Pinus edulis-Juniperus* spp.) woodlands are the most abundant forest type in Arizona, occupying approximately 14.8 million acres, or 20.3% of the state. The rarest and most significant in ecological terms is riparian forest, which occupies less than one-half of 1% of Arizona's land.

In urban areas, we experience urban forests that are typically composed

13.4 million acres  
surveyed by air

459,000 acres of tree  
damage from bark  
beetles

66% increase in  
bark beetle activity

34,000 acres of trees  
damage from foliar  
blight